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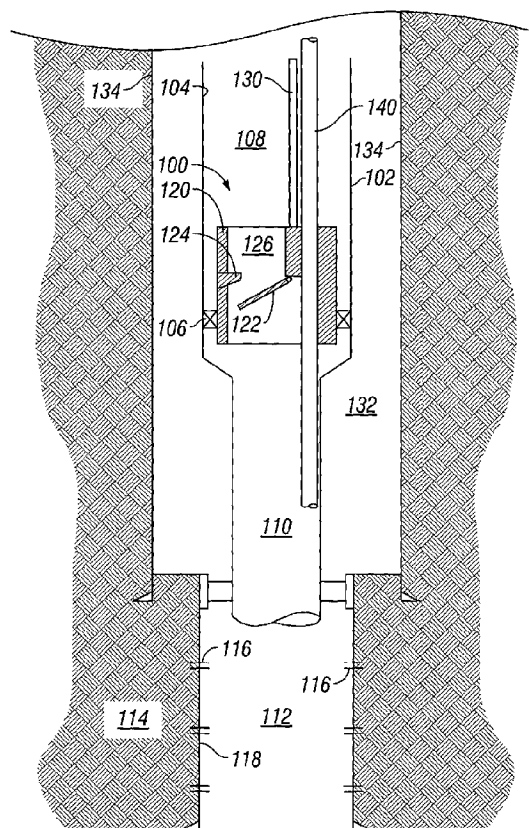
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[Continued on next page]

(54) Title: DOWNHOLE SAFETY VALVE APPARATUS AND METHOD



(57) Abstract: The application discloses a valve, which may include either a safety valve or a storm surge choke valve or the like, to isolate a zone below a valve from a string of production tubing. Preferably, the valve includes a flow interruption surface assembly, such as a flapper valve or a ball valve, displaced by an operating conduit extending from a surface location to the valve through the inside of the production tubing. The application also discloses a bypass-conduit inside the production tubing to allow communication from a surface location to the production zone when the valve is in either an open or a closed location.



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/35601

A. CLASSIFICATION OF SUBJECT MATTER

IPC: E21B 34/10(2006.01)

USPC: 166/375,386,65.1,322

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 166/375,386,65.1,322,68,105

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2,416,842A (O'LEARY) 04 March 1947(04.03.1947), see figures 2 and 3.	1-54
A	US 4,022,273 A (MARATHE) 10 May 1977 (10.05.1977), see figures 1-11.	1-54
A	US 4,387,767 A (READ) 14 June 1983 (14.06.1983), see figures 1-4.	1-54

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means	
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